Docket No.: 12810-00042-US1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Frank Dietsche et al.

Application No.: 10/529,629 | Confirmation No.: 1355

Filed: March 31, 2005 | Art Unit: 1797

For: METHOD FOR THE DESTRUCTION OF MICROORGANISMS | Examiner: M. R. Chorbaji

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MS Appeal
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

INTRODUCTORY COMMENTS

Further to the Office Action dated March 4, 2009, finally rejecting claims 1, 3, 6, 10, 11, and 13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,458,348 to Tropsch et al. in view of *In re Wertheim* and in further view of U.S Patent No. 4,036,788 to Steckler and rejecting claims 5, 7, 9, 15, 16, and 18 under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and in further view of U.S. Patent No. 5,922,776 to Wellinghoff et al., and the Advisory Action dated June 11, 2009, stating that the June 3, 2009 Response after Final Rejection failed to bring this application into condition for allowance, the Review Panel is respectfully requested to review the legal and factual basis of the rejection prior to the filing of an appeal brief in light of the following remarks.

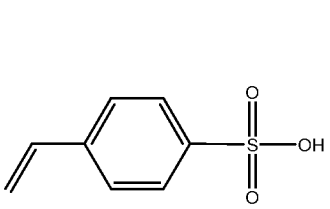
REMARKS

Claims 1, 3, 6, 10, 11, and 13 have been rejected, at paragraph 4, under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,458,348 to Tropsch et al. in view of *In re Wertheim* and in further view of U.S. Patent No. 4,036,788 to Steckler. Claims 5, 7, 9, 15, 16, and 18 have been rejected, at paragraph 8, under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and in further view of U.S. Patent No. 5,922,776 to Wellinghoff et al.

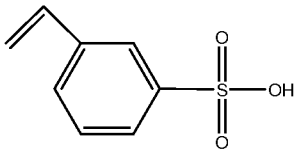
Independent claims 1 and 7 recite, among other features, a polymer comprising (a) from 30 to 98 mol% of styrenesulfonic acid, (b) from 2 to 40 mol% of an N-vinyllactam, and (c) from 0 to 30 mol% of free-radically polymerizable monomers, wherein the mol% is based on the total molar amount of all monomer units present in the polymer, and the sum of (a), (b), and (c) totals 100 mol%. At least these features cannot reasonably be considered to be suggested by the applied citations.

The Office Action relies on the exemplifying compounds taught in col. 9, line 23 to col. 11, line 6, of Tropsch for a teaching of features corresponding to the above-quoted features of claims 1 and 7. Specifically, the Office Action, at page 5, lines 9-10, relies on styrenesulfonic acid taught at col. 10, line 53, of Tropsch to correspond to component (a) of claims 1 and 7.

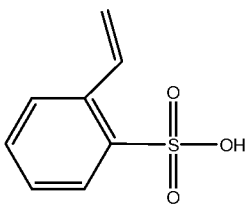
Applicants respectfully submit that styrenesulfonic acid is not a primary vinylamine, as taught in Tropsch. As set forth on page 4, lines 13-17, of Applicants' disclosure, 4-styrenesulfonic acid is the preferred isomer of styrenesulfonic acid, however, 2-styrenesulfonic acid, 3-styrenesulfonic acid, or mixtures comprising two or all three styrenesulfonic acid isomers may also be used. The isomers of styrenesulfonic acid have the following structures:



4-styrenesulfonic acid



3-styrenesulfonic acid

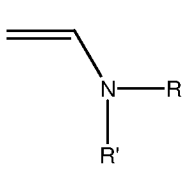


2-styrenesulfonic acid

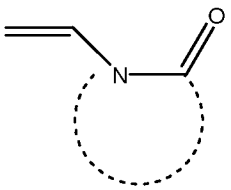
Styrenesulfonic acid cannot be considered to correspond to a primary vinylamine, as taught in Tropsch because styrenesulfonic acid does not contain an amino group or even a nitrogen atom.

The Office Action, at page 4, lines 17-18, relies on N-vinylpyrrolidone taught at col. 9, line 28, of Tropsch to correspond to component (b) of claims 1 and 7. Finally, the Office Action, at page 4, lines 19-20, relies on acrylonitrile taught at col. 9, line 31, of Tropsch to correspond to component c of claims 1 and 7. However, Tropsch fails to suggest that the sum of styrenesulfonic acid, N-vinylpyrrolidone, and acrylonitrile totals 100%. Instead, the prepolymers of Tropsch comprise, as set forth at col. 9, line 25, from 1 to 100 mol% of a primary vinylamine.

Applicants disagree with the assertion in the Office Action at page 5, lines 17-18, and at page 19, lines 10-11, that a primary vinylamine, as taught in Tropsch, can reasonably be considered to correspond to an N-vinyllactam, as claimed. The structures of these two classes of chemical compounds are exemplified below, wherein the dashed line indicates a ring connecting the carbonyl carbon atom to the nitrogen atom:



vinylamine



vinyllactam

Primary vinylamines and N-vinyllactams are structurally different molecules, as evidenced, for example, by original claim 1, which recited N-vinylamines and N-vinyllactams. However, the claim feature N-vinylamine has been removed from claims 1 and 7 in the Amendment filed December 11, 2008.

Moreover, Tropsch teaches, at col. 1, lines 4-20, that the invention therein relates to the use of polymers comprising as essential structural elements units of formula I and/or II. Thus, the polymers in Tropsch necessarily comprise primary vinylamine monomers, some or all of which are of formula I and/or II. Tropsch not only fails to teach that the sum of (a), (b), and (c) totals

100 mol%, but teaches away from this claim feature of independent claims 1 and 7 because the polymers of Tropsch comprise units of formula I and/or II as essential components.

Steckler is applied for suggesting a hydrogel composition including N-vinyllactam. Steckler is not applied for curing the deficiencies of Tropsch discussed above.

At paragraph 11, the Office Action sets forth several examples of polymers considered to be within the scope of the pending claims. At page 19, lines 4-5, the Office Action asserts that a primary vinylamine corresponds to component (a). Applicants respectfully submit that a primary vinylamine cannot reasonably be considered to correspond to styrenesulfonic acid. At page 19, lines 5-7, the Office Action asserts that Tropsch teaches, at col. 9, lines 26 and 39-40, a composition comprising 99 mol % N-vinylpyrrolidone and 1 mol% styrenesulfonic acid. This assertion is incorrect. Instead, Tropsch teaches a prepolymer comprising 1 to 100 mol % of a primary vinylamine and 0 to 99 mol% of other monomers, such as vinylpyrrolidone. Therefore, the prepolymers at the passage indicated at the Office Action contain at a minimum 1% of a primary vinylamine. Thus, even if a skilled artisan would select N-vinylpyrrolidone, styrenesulfonic acid and acrylonitrile as the other monomers, these would amount to a maximum of 99 mol % and would contain at least 1 mol % of primary vinylamine.

The Office Action relies on Wellinghoff for suggesting spray-drying. Wellinghoff is not applied in a manner to cure the deficiencies of Tropsch discussed above.

Claim 4 has been rejected, at paragraph 5, under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and in further view of U.S. Patent No. 6,482,392 to Zhou et al. Claim 14 has been rejected, at paragraph 6, under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and in further view of U.S. Patent No. 6,040,406 to Carrier et al. Claim 12 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and in further view of U.S. Patent No. 5,712,339 to Guerin et al. Claims 8 and 17 have been rejected, at paragraph 9, under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and Wellinghoff and in further view of Guerin. Claim 19 has been rejected, at

paragraph 10, under 35 U.S.C. §103(a) as being unpatentable over Tropsch in view of Steckler and Wellinghoff and in further view of Carrier.

The Office Action relies on Zhou for suggesting stabilizing a dispersion ionically, on Carrier for suggesting a water-dispersible polymer with a polydispersity of 2.06, on Guerin for suggesting acetoacetoxyethyl methacrylate, and on Wellinghoff for suggesting spray drying. However, Zhou, Carrier, Guerin, and Wellinghoff are not applied in a manner to cure the deficiencies of Tropsch discussed above.

Claims 2-6 and 8-19 depend on claims 1 or 7. Claims 2-6 and 8-19 are in condition for allowance for at least their dependence on allowable claims 1 and 7, as well as for the separately patentable subject matter that each of claims 2-6 and 8-19 recites.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant concurrently herewith submits the requisite fee for a Notice of Appeal and a Petition for a one-month Extension of time. Applicant believes no fee additional fee is due with this response. However, if any additional fee is due, please charge our Deposit Account No. 22-0185, under Order No. 12810-00042-US1 from which the undersigned is authorized to draw.

Dated: June 19, 2009

Respectfully submitted,

Electronic signature: /Georg M. Hasselmann/
Georg M. Hasselmann
Registration No.: 62,324
CONNOLLY BOVE LODGE & HUTZ LLP
1875 Eye Street, NW
Suite 1100
Washington, DC 20006
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant